

**NUCUT** WAVY-TEETH FILES  
(AMERICAN PATTERN)

**VIXEN** MILLED, CURVED-TOOTH FILES

**HELLER** SWISS PATTERN FILES

MANUFACTURED BY

**HELLER**  
BROTHERS COMPANY  
NEWCOMERSTOWN, OHIO



PATENT

WINIEWICZ HARDWARE CO.,  
1065 RAILROAD, BUFFALO, N.Y.

# HELLER BROTHERS COMPANY

A NEW JERSEY CORPORATION

MANUFACTURER OF FILES, RASPS AND TOOLS

NEWCOMERSTOWN, OHIO

WINIEWICZ HARDWARE CO.,

1069 BROADWAY, BUFFALO, N.Y.

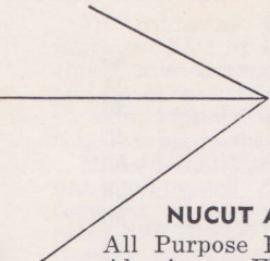
America's oldest  
file manufacturer ...



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## FILE PROGRESS

For centuries, file manufacturers painstakingly cut files by hand using only a hammer, a chisel and a sharp eye. It wasn't till the middle of the 19th century that the first important advance in the industry—the file cutting machine—was developed.

Many years later, the Heller Brothers Company pioneered the second important stride forward in file manufacture. This development, the Heller Nucut file, features a revolutionary tooth design. Instead of the evenly spaced teeth found on an ordinary file, Nucut files have a combination of fine and coarse teeth. This makes possible faster cutting, easier clearing, and a smoother finish. Nucut is ideal for all types of metals and has a longer life than other files.

## OTHER BRANDS

The Heller Brothers Company also manufacture the well known "American Swiss" brand, as well as the famous "Vixen" curved tooth file. In addition, "Johnson" and "Black King" commercial grade files are produced by Heller.

## SELECTING AND ORDERING FILES

All files fall into one of several broad categories, according to their design or use. Most commonly used are those in the saw file group, which are normally single cut; and the machinist's file group, which are double cut. The single cut are mill type files producing a smoother finish than the double cut, but the double cut removes more metal.

Other categories include (1) Special Purpose Files such as the Lead Float, Brass, Aluminum, Long Angle Lathe, and Foundry; (2) Rasps; (3) Milled Curved Tooth (Vixen); and (4) Swiss Pattern Files. Swiss Pattern files are used by jewelers, die makers, tool makers, and anyone requiring precision files for intricate or delicate work. In the Swiss Pattern category, Heller Brothers Company produces the Heller Brand, and the well known American Swiss Brand.

To be sure of getting the right file always specify the length, the shape, and the cut.

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## BRANCH OFFICES:

BROOKLYN 11  
50 UNION AVE.

DETROIT 9  
4461 W. JEFFERSON AVE.

CHICAGO 6  
166 N. CLINTON ST.

Prices upon application

# MILL FILES

Designed for sharpening mill saws, circular saws, ice saws, machine knives, knives on lawn mowers, shears, axes, etc. These files are also made with a SINGLE CUT for use in lathe work and polishing

work where an extremely smooth finish is desired. Both edges are cut. Available in three different cuts: Bastard, Second Cut and Smooth.



## MADE IN SIZES:

Approximate size of finished files:

**4"**

$\frac{7}{16}'' \times \frac{5}{64}''$

**6"**

$\frac{19}{32}'' \times \frac{7}{64}''$

**\*7"**

$\frac{11}{16}'' \times \frac{1}{8}''$

**8"**

$\frac{25}{32}'' \times \frac{9}{64}''$

## MADE IN SIZES:

Approximate size of finished files:

**10"**

$\frac{31}{32}'' \times \frac{11}{64}''$

**12"**

$\frac{15}{32}'' \times \frac{7}{32}''$

**14"**

$\frac{15}{16}'' \times \frac{1}{4}''$

**\*16"**

$1\frac{1}{2}'' \times \frac{9}{32}''$

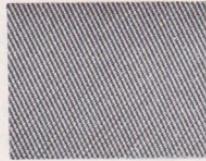
\*Made in Bastard Cut only.

Illustrated below is the cut of a "wavy tooth" mill file, a Heller NUCUT exclusive. Single cut mill files are also available.

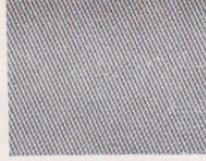
"Coarse" cut, which is slightly coarser than Bastard, is available on order, in the 6", 8", 10", 12", and 14" lengths, at Bastard prices.



10" Bastard



10" Second Cut



10" Smooth

Prices upon application

# MILL FILES — 1 AND 2 ROUND EDGES

Made in Bastard Cut only.



## MADE IN SIZES:

Approximate size of finished files:  $1\frac{9}{32}'' \times \frac{7}{64}''$

**6"**

**8"**

**10"**

**12"**

$12''$  not made in  
2 Round Edges

Approximate size of finished files:  $1\frac{9}{32}'' \times \frac{7}{64}''$

$2\frac{5}{32}'' \times \frac{9}{64}''$

$3\frac{1}{32}'' \times 1\frac{1}{64}''$

$1\frac{5}{32}'' \times \frac{7}{32}''$

# SPECIAL CROSSCUT FILES

Made in Bastard Cut only.



Special Crosscut Files are made particularly for filing Crosscut Saws and Circular Saws. They are parallel in width and thickness, and cut like Mill Files. Nucut Wavy Teeth enable Special Crosscut

Files to sharpen saws much faster than the ordinary Crosscut File. These files are also made with a SINGLE CUT.

## MADE IN SIZES:

Approximate size of finished files:

**6"**

$1\frac{9}{32}'' \times \frac{7}{64}''$

**7"**

$1\frac{1}{16}'' \times \frac{1}{8}''$

**8"**

$2\frac{5}{32}'' \times \frac{9}{64}''$

**10"**

$3\frac{1}{32}'' \times 1\frac{1}{64}''$

Prices upon application

## TAPER SAW FILES

Taper Files, or Saw Files, are used primarily for sharpening saws. When selecting a saw file, choose one that has a cross section at least twice the depth

of the saw tooth. Use as long a file as possible to enable user to make steady and effective strokes.

### TAPER



#### MADE IN SIZES:

Approximate size of finished files:

**6"**

$1\frac{5}{32}''$

**7"**

$1\frac{7}{32}''$

**8"**

$1\frac{9}{32}''$

**10"**

$2\frac{3}{32}''$

### SLIM TAPER FILES



#### MADE IN SIZES:

Approximate size of finished files:

**4"**

$\frac{7}{32}''$

**5"**

$\frac{9}{32}''$

**6"**

$1\frac{1}{32}''$

**7"**

$1\frac{3}{32}''$

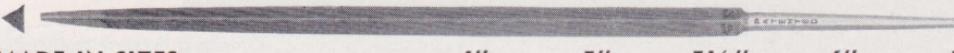
**8"**

$1\frac{5}{32}''$

**10"**

$\frac{5}{8}''$

### EXTRA SLIM TAPER FILES



#### MADE IN SIZES:

Approximate size of finished files:

**4"**

$\frac{3}{16}''$

**5"**

$1\frac{5}{64}''$

**5 1/2"**

$\frac{1}{4}''$

**6"**

$\frac{9}{32}''$

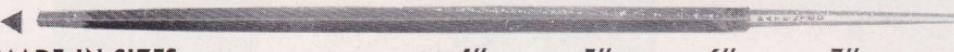
**7"**

$\frac{5}{16}''$

**8"**

$1\frac{5}{32}''$

### DOUBLE EXTRA SLIM TAPER FILES



#### MADE IN SIZES:

Approximate size of finished files:

**4"**

$\frac{5}{32}''$

**5"**

$\frac{3}{16}''$

**6"**

$1\frac{1}{32}''$

**7"**

$\frac{1}{4}''$

**8"**

$\frac{5}{16}''$

## BANDSAW BLUNT FILES

Bandsaw Files have rounded edges which, in sharpening bandsaws, produce rounded gullets between the teeth and reduce saw breakage. They are

parallel, and are made in the regular and slim shapes.



### MADE IN SIZES:

Approximate size of finished files:      Regular      Slim

6"

$1\frac{5}{32}$ "  
 $\frac{5}{16}$ "

8"

$1\frac{9}{32}$ "  
 $1\frac{5}{32}$ "

## DOUBLE ENDER FILES

Double Ender Files are used the same as Slim Tapers, but with the added advantage of having two files in one. Handle can be readily attached

as illustrated below. Six handles to each dozen files.



### MADE IN SIZES:

Approximate size of finished files:      6"      7"      8"      9"      10"

$1\frac{3}{64}$ "

$\frac{7}{32}$ "

$\frac{9}{32}$ "

$1\frac{1}{32}$ "

$\frac{3}{8}$ "

## DOUBLE ENDER FILES WITH HANDLE



Prices upon application

## CHAIN SAW FILES

Nucut Chain Saw Files are the product of long and exhaustive research. Their scientific tooth construction enables them to cut cleanly and give long life.

A size and shape for every type chain saw.  
"SC" indicates single cut. "DC" indicates double cut.

### ROUND CHAIN SAW FILES



No.	Size	Cut	No.	Size	Cut
2711	8"x $\frac{9}{16}$ "	Smooth DC	3386	8"x $\frac{9}{32}$ "	Smooth DC
2850	8"x $\frac{9}{16}$ "	Bastard DC	2724	8"x $\frac{5}{16}$ "	Bastard DC
2714	8"x $\frac{7}{32}$ "	Bastard DC	2716	8"x $\frac{5}{16}$ "	Smooth DC
2715	8"x $\frac{7}{32}$ "	Smooth DC	2673	8"x $\frac{3}{8}$ "	Bastard DC
2843	8"x $\frac{1}{4}$ "	Bastard DC	2672	8"x $\frac{3}{8}$ "	Smooth DC
2720	8"x $\frac{1}{4}$ "	Smooth DC			

### ROUND WITH FLAT SECTION CHAIN SAW FILE



No.	Size	Cut
3212	8"x $\frac{3}{8}$ "	Smooth SC

Continued on next page

## CHAIN SAW (Continued)

### MILL 2 ROUND EDGES CHAIN SAW FILES



No.	Size	Cut
3084 Standard	8" x 5/8" 8" x 25/32" x 9/64"	Single Cut Single Cut

### SQUARE CHAIN SAW FILES



No.	Size	Cut
3067	8" x 7/32"	Smooth DC
2712	8" x 1/4"	Smooth DC
2842	6" x 1/4"	Smooth SC

### LOZENGE CHAIN SAW FILE



No.	Size	Cut
3365	6" x 1 1/32" x 15/64"	Smooth DC

Prices upon application

## CROSSCUT FILES (Great American)

Crosscut Files are used for sharpening Crosscut Saws of the Great American type. Rounded backs are used to deepen the rounded gullets of saws.



### MADE IN SIZES:

Approximate size of finished files:

**6"**

$\frac{9}{16}'' \times \frac{3}{16}''$

**8"**

$\frac{11}{16}'' \times \frac{9}{32}''$

**10"**

$\frac{13}{16}'' \times \frac{23}{64}''$

## CANTSAW FILES

Principally for filing "M" shape teeth of crosscut saws.



### MADE IN SIZES:

Approximate size of finished files:

**6"**

$\frac{17}{32}'' \times \frac{15}{64}''$

**7"**

$\frac{39}{64}'' \times \frac{1}{4}''$

**8"**

$\frac{11}{16}'' \times \frac{9}{32}''$

**10"**

$\frac{13}{16}'' \times \frac{11}{32}''$

## FLAT FILES

Flat Files are used for general utility work in machine shops, factories, garages, etc. Have teeth on both flat sides and on both edges. Made in three different cuts: Bastard, Second Cut and Smooth.

The Bastard Cut is used mainly where it is the desire to remove metal quickly. The Second and Smooth Cut Files are used where a smooth finish is required.



### MADE IN SIZES:

Approximate size of finished files:

**4"**  
 $1\frac{5}{32}'' \times \frac{3}{32}''$

**6"**  
 $\frac{5}{8}'' \times \frac{5}{32}''$

**8"**  
 $2\frac{7}{32}'' \times \frac{7}{32}''$

**10"**  
 $3\frac{1}{32}'' \times \frac{1}{4}''$

### MADE IN SIZES:

Approximate size of finished files:

**12"**  
 $1\frac{5}{32}'' \times \frac{9}{32}''$

**14"**  
 $1\frac{11}{32}'' \times \frac{5}{16}''$

**16"**  
 $1\frac{17}{32}'' \times 1\frac{11}{32}''$

**\*18"**  
 $1\frac{11}{16}'' \times \frac{3}{8}''$

\*Made in Bastard Cut only.

Illustrations below show the comparative coarseness of 10-inch Flat Files, in the Bastard, Second, and Smooth Cuts.

Coarse Cut, which is slightly coarser than Bastard, is available in the 6", 8", 10", 12" and 14" lengths at Bastard prices.



10" Bastard



10" Second Cut



10" Smooth

Prices upon application

## HALF ROUND FILES WITH SPIRAL CUT

Half Round Files, with their one flat side, one half round side, and sharp edges, are very versatile. The Half Round back makes them ideal for getting into rounded holes, concave corners, crevices, etc. Because of the spiral cut on the back of Nucut

Half Round Files, it is possible to get a much smoother finish than with the old type of files that have the back cut with teeth in straight rows. Half Round Files are made in three different cuts: Bastard, Second Cut and Smooth.



### MADE IN SIZES:

Approximate size of finished files:

**4"**

$\frac{7}{16}'' \times \frac{1}{8}''$

**6"**

$\frac{19}{32}'' \times \frac{5}{32}''$

**8"**

$\frac{3}{4}'' \times \frac{7}{32}''$

### MADE IN SIZES:

Approximate size of finished files:

**10"**

$\frac{15}{16}'' \times \frac{9}{32}''$

**12"**

$1\frac{1}{8}'' \times 1\frac{1}{32}''$

**14"**

$1\frac{9}{32}'' \times 1\frac{13}{32}''$

**\*16"**

$1\frac{15}{32}'' \times 1\frac{15}{32}''$

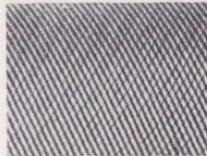
\*Not made in Second Cut.

Illustrations below show comparative coarseness of cut on 10-inch Half Round Files, in the Bastard, Second and Smooth Cuts.

Coarse cut, which is slightly coarser than Bastard, is available in the 6", 8", 10", 12" and 14" lengths, at Bastard prices.



10" Bastard



10" Second Cut



10" Smooth

Prices upon application

## ROUND FILES

Round Files are used for enlarging circular openings, concave surfaces, angles, etc., and for making fillets. Nucut round files have a spiral tooth

which tends to give a smooth and even surface.  
Made in Bastard, Second and Smooth Cuts.



### MADE IN SIZES:

	<b>4"</b>	<b>6"</b>	<b>*7"</b>	<b>8"</b>	<b>10"</b>	<b>12"</b>	<b>14"</b>	<b>*16"</b>
Approximate size of finished files:	$\frac{5}{32}"$	$\frac{7}{32}"$	$\frac{17}{64}"$	$\frac{5}{16}"$	$\frac{3}{8}"$	$\frac{1}{2}"$	$\frac{5}{8}"$	$\frac{3}{4}"$

\*Made in Bastard Cut only.

Illustrations below show comparative coarseness in cut on the  
10-inch Round Files, in the Bastard, Second and Smooth Cuts.



10" Bastard



10" Second Cut



10" Smooth

Prices upon application

## THREE SQUARE FILES

For general machine shop use in filing internal angles, for filing out sharp corners, and for filing

cutters, taps, etc. Made in Bastard, Second and Smooth Cuts.



### MADE IN SIZES:

Approximate size of finished files:

**6"**

$15\frac{1}{32}"$

**8"**

$5\frac{1}{8}"$

**10"**

$3\frac{1}{4}"$

**12"**

$27\frac{1}{32}"$

## HAND FILES

Hand Files are used for general utility work in machine shops, factories, garages, etc. They are similar to flat files, are parallel in width. Cut on both flat sides and on one edge. Made in three

different cuts: Bastard, Second Cut and Smooth. The Bastard Cut is used to remove metal quickly. The Second and Smooth Cut Files are used where a smooth finish is required.



### MADE IN SIZES:

Approximate size of finished files:

**6"**

$\frac{5}{8}'' \times \frac{5}{32}''$

**8"**

$25\frac{1}{32}'' \times 7\frac{1}{32}''$

**10"**

$31\frac{1}{32}'' \times \frac{1}{4}''$

**12"**

$1\frac{5}{32}'' \times \frac{9}{32}''$

**14"**

$1\frac{11}{32}'' \times \frac{5}{16}''$

Prices upon application

## SQUARE FILES

Square Files are generally used for filing keyways, slots, grooves, square holes and flat surfaces. Made in Bastard, Second, and Smooth Cuts.

Coarse cut, which is slightly coarser than Bastard, is available in the 6", 8", 10", 12", and 14" lengths, at Bastard prices.



### MADE IN SIZES:

Approximate size of finished files:

	4"	6"	8"	10"	12"	14"	*16"
	5/32"	7/32"	5/16"	3/8"	1/2"	5/8"	3/4"

\*Made in Bastard Cut only.

## PILLAR FILES

Pillar Files have a rectangular cross section, one safe and one cut edge. They are similar to hand files, but are narrower in proportion to length.

Used by machinists, mechanics, and millwrights in filing slots and keyways. Made in Bastard, Second, and Smooth Cuts.



### MADE IN SIZES:

Approximate size of finished files: 7/16" x 7/32"    9/16" x 9/32"    21/32" x 11/32"    25/32" x 13/32"    29/32" x 15/32"

\*Made in Bastard Cut only.

Prices upon application

## WARDING FILES

Warding Files are used by locksmiths in making and repairing keys. Because of their thinness they are adaptable for filing small notches and slots,

and are also used for sharpening small twist drills and other small tools. They are made in Bastard, Second, and Smooth Cuts.



### MADE IN SIZES:

Approximate size of finished files:      4"      6"      8"      10"      \*12"

\*Made in Bastard Cut only

## KNIFE FILES

Knife Files are similar in shape to a knife blade, and are used in getting into very small crevices, slots, keyways, etc. Generally used by tool and die

makers for acute angles. Made in Bastard, Second, and Smooth Cuts.



### MADE IN SIZES:

Approximate size of finished files:

4"      6"      8"      10"  
 $1\frac{5}{32}'' \times \frac{7}{64}''$        $2\frac{1}{32}'' \times \frac{5}{32}''$        $2\frac{7}{32}'' \times \frac{3}{16}''$        $1\frac{1}{32}'' \times \frac{1}{4}''$

Prices upon application

## HALF ROUND ALUMINUM FILES TYPE "A"

Aluminum Files are made particularly for filing aluminum and other soft metals. They file rapidly and will not clog. Made in half round and flat shapes. illustrated. By filing toward the left, a

smooth finish can readily be obtained. One cut only. The Half Round Type "A" are furnished in pointed shapes in 6", 8", and 10" lengths and on American Pattern Blanks in the 12" and 14" lengths.



### MADE IN SIZES:

Approximate size of finished files: 6"      8"      10"      12"      14"  
 $\frac{19}{32}'' \times \frac{5}{32}''$        $\frac{3}{4}'' \times \frac{7}{32}''$        $\frac{15}{16}'' \times \frac{9}{32}''$        $1\frac{1}{8}'' \times \frac{11}{32}''$        $1\frac{9}{32}'' \times \frac{13}{32}''$

## FLAT ALUMINUM TYPE "A"



### MADE IN SIZES:

Approximate size of finished files: 6"      8"      10"      12"      14"  
 $\frac{5}{8}'' \times \frac{5}{32}''$        $\frac{25}{32}'' \times \frac{7}{32}''$        $\frac{31}{32}'' \times \frac{1}{4}''$        $1\frac{5}{32}'' \times \frac{9}{32}''$        $1\frac{11}{32}'' \times \frac{5}{16}''$

Prices upon application

## FLAT FOUNDRY FILES

Made with short stub teeth for snagging purposes.



### MADE IN SIZES:

Approximate size of finished files:

**8"**  
 $2\frac{5}{32}'' \times \frac{7}{32}''$

**10"**  
 $3\frac{1}{32}'' \times \frac{1}{4}''$

**12"**  
 $1\frac{5}{32}'' \times \frac{9}{32}''$

**14"**  
 $1\frac{11}{32}'' \times \frac{5}{16}''$

## HALF ROUND FOUNDRY FILES

Made with short stub teeth for snagging purposes.



### MADE IN SIZES:

Approximate size of finished files:

**8"**  
 $\frac{3}{4}'' \times \frac{7}{32}''$

**10"**  
 $1\frac{5}{16}'' \times \frac{9}{32}''$

**12"**  
 $1\frac{1}{8}'' \times 1\frac{1}{32}''$

**14"**  
 $1\frac{9}{32}'' \times 1\frac{13}{32}''$

## FLAT LEAD FLOAT FILES

Designed for filing lead and babbitt, and also effective on other softer metals. Made in coarse single cut only.



### MADE IN SIZES:

Approximate size of finished files:

**8"**  
 $2\frac{5}{32}'' \times \frac{7}{32}''$

**10"**  
 $3\frac{1}{32}'' \times \frac{1}{4}''$

**12"**  
 $1\frac{5}{32}'' \times \frac{9}{32}''$

## HALF ROUND LEAD FLOAT FILE

Used on the same types of soft metals as Flat Lead Float Files, but for filing curved surfaces, holes,

and rounded corners. In coarse single cut only.



### MADE IN SIZES:

Approximate size of finished files:

**8"**  
 $\frac{3}{4}'' \times \frac{7}{32}''$

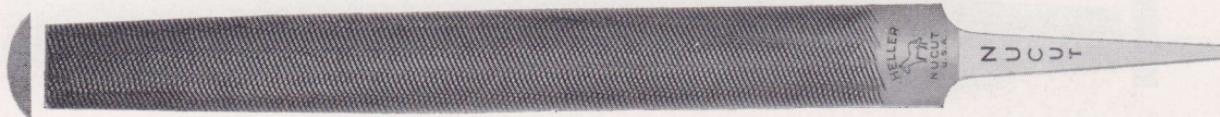
**10"**  
 $1\frac{5}{16}'' \times \frac{9}{32}''$

**12"**  
 $1\frac{1}{8}'' \times \frac{11}{32}''$

Prices upon application

## CABINET FILES

Used by woodworkers and cabinet makers. They have oval backs with a larger radius than a regular half round file. One cut only.



### MADE IN SIZES:

Approximate size of finished files:

**8"**  
 $\frac{7}{8}'' \times \frac{3}{16}''$

**10"**  
 $1\frac{1}{8}'' \times \frac{7}{32}''$

**12"**  
 $1\frac{5}{16}'' \times \frac{1}{4}''$

## HALF ROUND BRASS FILES

Very sharp with an open cut and recommended for soft metals such as brass, copper, aluminum, etc. It is recommended that slight pressure be put on

this file when using it. One cut only. Furnished with narrow points in the 8" and 10" sizes and on American pattern blanks in the 12" sizes.



### MADE IN SIZES:

Approximate size of finished files:

**8"**  
 $\frac{3}{4}'' \times \frac{7}{32}''$

**10"**  
 $1\frac{5}{16}'' \times \frac{9}{32}''$

**12"**  
 $1\frac{1}{8}'' \times \frac{11}{32}''$

Prices upon application

## MULTI-KUT FILES

The MULTI-KUT File is used as a general purpose file for various degrees of filing, dispensing with the need of two or more files on certain jobs. Teeth are cut on standard flat blanks, single cut at 30°

angle with superficial chip-breaking grooves ground at a 75° angle from lower left to upper right. Especially suited for right-handed filers. Edges cut. One degree of coarseness only.



### MADE IN SIZES:

Approximate size of finished files:

**8"**

$2\frac{5}{32}'' \times \frac{7}{32}''$

**10"**

$3\frac{1}{32}'' \times \frac{1}{4}''$

**12"**

$1\frac{5}{32}'' \times \frac{9}{32}''$

**14"**

$1\frac{11}{32}'' \times \frac{5}{16}''$

## LONG ANGLE LATHE FILES

Long Angle Lathe Files are made particularly for lathe filing where a very smooth finish is desired. Also used extensively for soft metals such as bronze,

brass, aluminum, etc. Cut on sides only with both edges safe (uncut). Bastard Cut only.



These files are made on the same blanks as flat files, in sizes:

Approximate size of finished files:

**10"**

$3\frac{1}{32}'' \times \frac{1}{4}''$

**12"**

$1\frac{5}{32}'' \times \frac{9}{32}''$

**14"**

$1\frac{11}{32}'' \times \frac{5}{16}''$

Prices upon application

## ALL PURPOSE FILE

An extremely useful household tool for a multitude of filing jobs. Coarse cut on one side, with finer

teeth on the second side for jobs where a smooth surface is required.



**MADE IN SIZES:**

**8"**

**10"**

**\*12"**

**\*14"**

\*The 12" and 14" sizes are made on standard flat blanks, not furnished with handle illustrated.

## FARMER'S OWN FILE

Requires no handle. Has mill type teeth, is ideal for sharpening edged tools. Made in 8" size only.



## FILE HANDLES

High grade wooden handles with the metal ferrule, designed to fit tangs of Heller files.

No. 104 4" long—for small files  
No. 106 4 $\frac{1}{4}$ " long—for files 4" to 8"  
No. 108 5" long—for files 8" to 10"

No. 110 5 $\frac{1}{2}$ " long—for files 12" to 14"  
No. 112 6" long—for files 16" to 20"



Regularly packed  $\frac{1}{4}$  gross of a size in a carton

## 7" AUGER BIT FILE

Heller Auger Bit Files are designed specifically for sharpening all types of auger bits. One end cut on

the flat sides, and the other end cut on the edges only. Made in 7-inch size only.

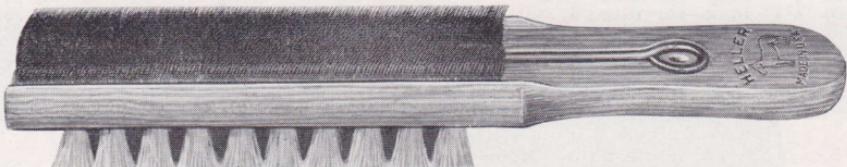


Prices upon application

## COMBINATION FILE CARD AND BRUSH

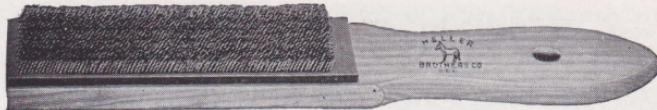
Combines a wire brush for cleaning teeth of large coarse-cut files, and a hard bristle brush for cleaning teeth of fine-cut files, plus small pick for re-

moving pieces of metal which stick between file teeth. The ideal file cleaner. Its frequent use will result in longer file life and better finish on your work.



## FILE CARDS

Metal brush for removing metal filings from the teeth of files.



Prices upon application

## **5" PATENTED TUNGSTEN POINT FILES (POCKET CLIP)**

Clip handle hangs inside overall pocket. Used for the same purposes as the regular Tungsten Point

Files. Packed in boxes containing a dozen files and also mounted on cards (one dozen to a card).



## **5" REGULAR TUNGSTEN POINT FILES**

For use by automobile mechanics and owners in cleaning distributor points and spark plugs. Also used in cleaning contact points of magnetos, switches, electric bells, etc. Made with a chisel tip

for entering gaps and slots. Packed in boxes containing a dozen files and also mounted on cards (one dozen to a card).



## **5" VOLTAGE REGULATOR FILES No. 2470**

For voltage regulators, circuit breakers, relay coils and other electrical contact points requiring an extra thin file with fine cut for a smooth finish.

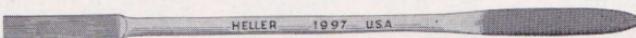
5" over-all— $\frac{5}{16}$ " wide, approximately .015" thick. Packaged on counter display cards only, one dozen on card—twelve cards to carton.



## **6" VOLTAGE REGULATOR RIFFLERS No. 1997**

Recommended for removing pits and corrosion from contact points and also for filing them to a smooth finish.

Length 6" over-all. Packaged on counter display cards only. One dozen on card—twelve cards to carton.



Prices upon application

## HALF ROUND WOOD RASPS

Wood Rasps are used by wood-workers, plumbers, aluminum workers, etc.

Half Round Wood Rasps are made in Bastard and Smooth Cuts.



### MADE IN SIZES:

\*6"              8"              10"              12"              \*14"              \*16"  
Approximate size of finished rasps:     $10\frac{1}{32}'' \times \frac{1}{4}''$      $35\frac{1}{32}'' \times \frac{5}{16}''$      $31\frac{1}{32}'' \times \frac{3}{8}''$      $1\frac{5}{32}'' \times \frac{7}{16}''$      $1\frac{11}{32}'' \times \frac{1}{2}''$      $1\frac{17}{32}'' \times \frac{9}{16}''$

\*Bastard cut only

## FLAT WOOD RASPS

Flat Wood Rasps are made in Bastard and Smooth Cuts.



### MADE IN SIZES:

\*8"              10"              12"              \*14"              \*16"  
Approximate size of finished rasps:     $25\frac{1}{32}'' \times \frac{9}{32}''$      $31\frac{1}{32}'' \times \frac{11}{32}''$      $1\frac{5}{32}'' \times \frac{13}{32}''$      $1\frac{11}{32}'' \times \frac{15}{32}''$      $1\frac{17}{32}'' \times \frac{17}{32}''$

\*Bastard cut only

Prices upon application

## CABINET RASPS

For Wood-workers and Cabinet makers. They have an oval back with a larger radius than a regular half round file. Made in Second and Smooth Cuts.



### MADE IN SIZES:

**6"**

**8"**

**10"**

**12"**

**14"**

Approximate size of finished rasps:  $1\frac{1}{16}$ " x  $\frac{3}{16}$ "     $2\frac{9}{32}$ " x  $\frac{1}{4}$ "     $1\frac{1}{8}$ " x  $\frac{9}{32}$ "     $1\frac{11}{32}$ " x  $1\frac{1}{32}$ "     $1\frac{9}{16}$ " x  $\frac{3}{8}$ "

## HALF ROUND SHOE RASPS

Used by shoe manufacturers and shoe repairers. Half of each surface is cut with file teeth, the other half with rasp teeth.



### MADE IN SIZES:

**8"**

**9"**

**10"**

Approximate size of finished rasps:

$\frac{7}{8}$ " x  $\frac{9}{32}$ "

$2\frac{1}{32}$ " x  $\frac{5}{16}$ "

$1\frac{1}{16}$ " x  $1\frac{1}{32}$ "

Prices upon application

## PLAIN HORSE RASPS

For horseshoers and farriers. One side has rasp teeth and the other side file teeth.



Regular Plain Horse Rasps are made in sizes:

**12"**

**14"**

**16"**

Approximate size of finished rasps:

$1 \frac{5}{16}'' \times 1 \frac{1}{32}''$

$1 \frac{1}{2}'' \times \frac{3}{8}''$

$1 \frac{23}{32}'' \times \frac{7}{16}''$

Plain Horse Rasps are also made in a slim pattern in sizes:

**18"**

**20"**

Approximate size of finished rasps:

$1 \frac{9}{16}'' \times 1 \frac{1}{32}''$

$1 \frac{11}{16}'' \times \frac{7}{16}''$

## TANGED HORSE RASPS

Used for the same purposes as the Plain Rasps. One side of the rasp is cut with rasp teeth and the other with file teeth.



Regular Tanged Rasps are made in sizes:

**12"**

**14"**

**16"**

Approximate size of finished rasps:

$1 \frac{1}{2}'' \times \frac{3}{8}''$

$1 \frac{3}{4}'' \times \frac{7}{16}''$

$1 \frac{7}{8}'' \times 1 \frac{5}{32}''$

Tanged Rasps are also made in a Thin pattern in size:

**14"**

Approximate size of finished rasp:

$1 \frac{3}{4}'' \times 1 \frac{1}{32}''$

## **14" TANGED "RACE-TRAK" HORSE RASP**

The Race-Trak Horse Rasp is designed for use on race, trotting, saddle horses, and ponies. Made of much thinner steel (about .200" thick), it is lighter in weight, permits faster work with less fatigue.

Two extra rows of teeth per inch and one extra tooth per row means more teeth contacting the hoof thus producing a smoother finish.



Approximate size of finished rasps:      14"x1 $\frac{3}{4}$ "x $\frac{9}{32}$ "

## **18" PLAIN "RACE-TRAK" HORSE RASP**



Approximate size of finished rasps:      18"x1 $\frac{9}{16}$ "x $\frac{11}{32}$ "

Prices upon application

## **HELLER SWISS PATTERN FILES**

Swiss Pattern Files differ from American Pattern Files in that they have sharp points on the tapered files and are made in seven different cuts instead of only three. They are manufactured in a greater variety of types and shapes than American Pattern Files, and are held to much closer tolerances. All Swiss Pattern Files are double cut.

These precision tools are used by die makers, jewelers, tool workers, and anyone doing precision work. The great variety of shapes and types as well as the finely tapered points make them ideal for "delicate" work.

## EQUALLING FILES

Equalling Files are parallel in width and thickness. Double cut on flat sides, and single cut on both edges.



### MADE IN SIZES:

Approximate size of finished files:       $\frac{5}{16}'' \times \frac{1}{16}''$   
Made in cuts: No. 00, No. 0, No. 1, No. 2 and No. 4.

Equalling Files may also be obtained in minimum quantities of one dozen without extra charge in the following B & S gauges:

3"—18 B&S gauge (.040")  
3"—20 B&S gauge (.032")  
4"—16 B&S gauge (.051")

4"—18 B&S gauge (.040")  
4"—20 B&S gauge (.032")  
6"—10 B&S gauge (.102")

6"—12 B&S gauge (.081")  
6"—14 B&S gauge (.064")  
8"—10 B&S gauge (.102")

## HAND FILES

Hand Files are parallel in width. Two flat sides are double cut. Cuts No. 00-0-2 are safe on one edge.

Cuts No. 3-4-6 are safe on two edges.



### MADE IN SIZES:

Approximate size of finished files:       $\frac{7}{16}'' \times \frac{5}{64}''$     $\frac{17}{32}'' \times \frac{7}{64}''$     $\frac{23}{32}'' \times \frac{5}{32}''$     $\frac{29}{32}'' \times \frac{3}{16}''$     $1\frac{1}{16}'' \times \frac{7}{32}''$     $1\frac{5}{32}'' \times \frac{1}{4}''$   
Made in cuts: No. 00, No. 0, No. 1, No. 2, No. 3, No. 4 and No. 6.  
No. 3 not in 12"  
No. 6 in 6"-8" only.

Prices upon application

## PILLAR FILES

Pillar Files are similar in shape to Hand Files, flat sides are double cut and both edges are safe but narrower in proportion to their length. Two (uncut).



### MADE IN SIZES:

	3"	4"	6"	8"	10"	12"
Approximate size of finished files:	$1\frac{9}{16}'' \times \frac{5}{64}''$	$2\frac{3}{16}'' \times \frac{7}{64}''$	$1\frac{15}{32}'' \times \frac{9}{64}''$	$3\frac{9}{64}'' \times 1\frac{3}{64}''$	$4\frac{7}{64}'' \times 1\frac{5}{64}''$	$5\frac{3}{64}'' \times 1\frac{7}{64}''$
Made in cuts:	No. 00, 0, 1, 2, 3, 4 and 6.					
No. 6 in 4" Only						
No. 3 not in 10" or 12"						

## NARROW PILLAR FILES

Narrow Pillar Files are the same shape as Pillar Files, but narrower in proportion to their length.

Two flat sides are double cut, the edges left safe (uncut).



### MADE IN SIZES:

	3"	4"	6"	8"	10"	12"
Approximate size of finished files:	$\frac{7}{32}'' \times \frac{5}{64}''$	$\frac{9}{32}'' \times \frac{7}{64}''$	$2\frac{3}{64}'' \times \frac{9}{64}''$	$2\frac{9}{64}'' \times 1\frac{3}{64}''$	$\frac{9}{16}'' \times 1\frac{7}{64}''$	$\frac{5}{8}'' \times \frac{5}{16}''$
Made in cuts:	No. 00, 0, 1, 2, 3, 4 and 6.					
No. 6 in 3", 4", 6" only						
No. 3 not in 10" or 12"						

Prices upon application

## EXTRA NARROW PILLAR FILES

Extra Narrow Pillar Files are the same shape as Pillar Files, but narrower in proportion to their

length. Two flat sides are double cut, the edges are left safe (uncut).

### MADE IN SIZES:

3"

4"

6"

8"

10"

12"

Approximate size of finished files:  $\frac{3}{64}$ " x  $\frac{3}{32}$ "    $\frac{11}{64}$ " x  $\frac{7}{64}$ "    $\frac{1}{4}$ " x  $\frac{9}{64}$ "    $\frac{5}{16}$ " x  $\frac{13}{64}$ "    $\frac{3}{8}$ " x  $\frac{15}{64}$ "    $\frac{7}{16}$ " x  $\frac{1}{4}$ "

Made in cuts: No. 00, No. 0, No. 1, No. 2, No. 3, No. 4 and No. 6.

No. 6 in 3", 4" and 6" only

No. 3 not in 10" or 12"

## SPECIAL PILLAR FILES

In addition to regular widths, Pillar Files, Pillar Narrow Files and Pillar Extra Narrow Files are furnished in the following widths in minimum

quantities of one dozen of the same kind, at no advance over regular prices:

### PILLAR

#### MADE IN SIZES:

8"

10"

12"

Approximate size of finished files:

$\frac{3}{4}$ " x  $\frac{3}{16}$ "

$\frac{5}{8}$ " x  $\frac{15}{64}$ "

1" x  $\frac{1}{4}$ "

### PILLAR NARROW

#### MADE IN SIZES:

6"

8"

10"

Approximate size of finished files:

$\frac{9}{32}$ " x  $\frac{1}{8}$ "

$\frac{3}{8}$ " x  $\frac{3}{16}$ "

$\frac{1}{2}$ " x  $\frac{15}{64}$ "

$\frac{5}{16}$ " x  $\frac{9}{64}$ "

.....

.....

### PILLAR EXTRA NARROW

#### MADE IN SIZES:

4"

6"

8"

Approximate size of finished files:

$\frac{3}{8}$ " x  $\frac{9}{64}$ "

$\frac{1}{8}$ " x  $\frac{5}{64}$ "

$\frac{3}{16}$ " x  $\frac{9}{64}$ "

.....

$\frac{5}{16}$ " x  $\frac{7}{64}$ "

$\frac{1}{4}$ " x  $\frac{9}{64}$ "

Prices upon application

## CROSSING FILES

Crossing Files are roughly oval in shape but the radius of one side is greater than the radius of the other side. They are double cut.



### MADE IN SIZES:

**3"**

**4"**

**6"**

**8"**

**10"**

Approximate size of finished files:  $\frac{5}{16}'' \times \frac{3}{32}''$     $\frac{7}{16}'' \times \frac{1}{8}''$     $\frac{5}{8}'' \times \frac{3}{16}''$     $1\frac{3}{16}'' \times \frac{1}{4}''$     $3\frac{1}{32}'' \times \frac{9}{32}''$

Made in cuts: No. 00, No. 0, No. 1, No. 2, No. 3, No. 4 and No. 6.

No. 6 not in 8" or 10".

## ROUND FILES

Round and tapered to a point. Double cut.



### MADE IN SIZES:

**3"**

**4"**

**5"**

**6"**

**8"**

**10"**

**12"**

Approximate size of finished files:  $\frac{3}{32}''$     $\frac{1}{8}''$     $\frac{5}{32}''$     $\frac{3}{16}''$     $\frac{1}{4}''$

Made in cuts: No. 00, No. 0, No. 1, No. 2, No. 3, No. 4, and No. 6.

No. 3 not in 10" or 12".

No. 6 not in 8"-10"-12"

Prices upon application

## ROUND STRAIGHT FILES

Round Straight Files have the same diameter as Round Files, but are parallel and do not taper to a point. They are double cut.

### MADE IN SIZES:

Approximate size of finished files:       $\frac{1}{8}$ "  
Made in cuts: No. 00, No. 0, No. 2 and No. 4.

Diameters given above are regular, and furnished unless customer specifies otherwise. Round Straight Files are also furnished in the following diameters,

### MADE IN SIZES:

Approximate size of finished files:

4"	5"	6"	8"
$\frac{1}{8}$ "	$\frac{5}{32}$ "	$\frac{3}{16}$ "	$\frac{1}{4}$ "

4"	5"	6"	8"
$\frac{1}{16}$ "	$\frac{3}{32}$ "	$\frac{1}{8}$ "	$\frac{3}{16}$ "
$\frac{3}{32}$ "	$\frac{1}{8}$ "	$\frac{5}{32}$ "	$\frac{7}{32}$ "
...	$\frac{3}{16}$ "	$\frac{7}{32}$ "	$\frac{5}{16}$ "
...	...	$\frac{1}{4}$ "	$\frac{3}{8}$ "
...	...	$\frac{3}{8}$ "	...

in minimum quantities of one dozen of the same size and cut, at no advance over regular prices.

## SQUARE FILES

Square Files are square in shape and are tapered to a point. They are double cut on three sides, and safe (uncut) on the fourth side.

### MADE IN SIZES:

Approximate size of finished files:       $\frac{1}{16}$ "       $\frac{7}{64}$ "       $\frac{5}{32}$ "       $\frac{15}{64}$ "       $\frac{21}{64}$ "       $\frac{27}{64}$ "  
Made in cuts: No. 00, No. 0, No. 1, No. 2, No. 3 and No. 4.  
No. 3 not in 10" or 12".

Prices upon application

## WARDING FILES

Warding Files are tapered in width to a point, and parallel in thickness. They are double cut on flat sides and single cut on the edges.



### MADE IN SIZES:

Approximate size of finished files:    3"                  4"                  6"                  8"                  10"  
                             $1\frac{1}{32}'' \times \frac{1}{32}''$        $\frac{7}{16}'' \times \frac{3}{64}''$        $1\frac{1}{32}'' \times \frac{5}{64}''$        $2\frac{5}{32}'' \times \frac{3}{32}''$        $1\frac{5}{16}'' \times \frac{7}{64}''$   
Made in cuts: No. 00, No. 0, No. 1, No. 2 and No. 4.

Warding Files may also be obtained in minimum quantities of one dozen without extra charge in the following B & S gauges:

3"—18 B&S gauge (.040")	4"—18 B&S gauge (.040")	6"—16 B&S gauge (.051")
3"—20 B&S gauge (.032")	4"—20 B&S gauge (.032")	6"—18 B&S gauge (.040")
3"—22 B&S gauge (.025")	6"—11 B&S gauge (.091")	6"—20 B&S gauge (.032")
4"—14 B&S gauge (.064")	6"—13 B&S gauge (.072")	8"—10 B&S gauge (.102")
4"—16 B&S gauge (.051")	6"—14 B&S gauge (.064")	10"—8 B&S gauge (.128")

## BARRETTE FILES

Barrette Files are cut on the wide flat side only. Back and beveled edges are safe (uncut).



### MADE IN SIZES:

Approximate size of finished files:    3"                  4"                  6"                  8"  
                             $\frac{3}{8}''$                    $\frac{1}{2}''$                    $2\frac{1}{32}''$                    $\frac{7}{8}''$   
Made in cuts: No. 00, No. 0, No. 1, No. 2, and No. 4.

Prices upon application

## HALF ROUND FILES

Half Round Files taper in width and thickness to the point.  
Flat and half round sides of the file are double cut.



### MADE IN SIZES:

Approximate size of finished files:

**3"**

$\frac{9}{32}'' \times \frac{3}{32}''$

**4"**

$\frac{3}{8}'' \times \frac{7}{64}''$

**5"**

$\frac{7}{16}'' \times \frac{7}{64}''$

**6"**

$\frac{33}{64}'' \times \frac{9}{64}''$

### MADE IN SIZES:

Approximate size of finished files:

**8"**

$4\frac{5}{64}'' \times \frac{3}{16}''$

**10"**

$1\frac{15}{16}'' \times \frac{17}{64}''$

**12"**

$1\frac{7}{64}'' \times \frac{5}{16}''$

Made in cuts: No. 00, No. 0, No. 1, No. 2, No. 3, No. 4 and No. 6.

No. 3 cut not made in 12" lengths.

No. 6 in 6" only.

## KNIFE FILES

Knife Files are shaped like knife blades, and taper in width and thickness to the point. These files are

double cut on both flat sides, and single cut on the sharp edge.



### MADE IN SIZES:

Approximate size of finished files:

**3"**

$\frac{3}{8}''$

**4"**

$\frac{31}{64}''$

**5"**

$\frac{9}{16}''$

**6"**

$2\frac{1}{32}''$

**8"**

$2\frac{7}{32}''$

Made in cuts: No. 00, No. 0, No. 1, No. 2, No. 3 and No. 4.

Nos. 1 and 3 cut not in 3" and 5".

Prices upon application

## THREE SQUARE FILES

Three Square Files are triangular in shape and tapered to a point. Double cut on all sides; edges are single cut.



### MADE IN SIZES:

	3"	4"	5"	6"	8"	10"
Approximate size of finished files:	5/32"	1/4"	5/16"	11/32"	15/32"	19/32"

Made in cuts: No. 00, No. 0, No. 1, No. 2, No. 3 and No. 4.  
No. 3 cut not in 5" and 10".

## METAL SAW FILES

Made from the same size steel as Three Square Files but are parallel the entire length. The three sides are double cut and the edges are single cut.



### MADE IN SIZES:

	3"	4"	5"	6"	8"
Approximate size of finished files:	5/32"	1/4"	5/16"	11/32"	15/32"

Made in cuts No. 0, No. 2 and No. 4.

Prices upon application

## CROCHET FILES

Crochet Files are flat in shape, tapering to a point, but the edges are rounded. They are double cut on flat sides and are cut on edges.



### MADE IN SIZES:

Approximate size of finished files:      3"      4"      6"      8"      10"  
 $1\frac{7}{16}'' \times \frac{5}{64}''$        $\frac{3}{8}'' \times \frac{3}{32}''$        $3\frac{1}{16}'' \times \frac{1}{8}''$        $1\frac{1}{16}'' \times \frac{5}{32}''$        $1\frac{3}{16}'' \times \frac{3}{16}''$

Made in cuts: No. 00, No. 0, No. 1, No. 2 and No. 4.

## PILLAR TESTING FILES

Similar in shape to Pillar Files, used to test the hardness of metals. The 6" file is furnished in the

same size as a regular pillar file. The 8" size is furnished on an 8" narrow pillar blank.



### MADE IN SIZES:

Approximate size of finished files:      6"      8"  
 $1\frac{5}{32}'' \times \frac{9}{64}''$        $2\frac{9}{16}'' \times 1\frac{3}{64}''$

Made in cuts: No. 0 and 1.

Prices upon application

## SLITTING FILES

Made in a special section similar to a flat diamond. They are double cut on four sides and single cut on the two sharp edges.



### MADE IN SIZES:

Approximate size of finished files:  
Made in cuts: No. 00, No. 0 and No. 2.

4"

7/16"

6"

3/8"

## PIPPIN FILES

Similar in cross section to a knife file, but having a rounded back, and tapering to a sharp edge.

Tapered in width and thickness to the point of the files. Double cut.



### MADE IN SIZES:

Approximate size of finished files:  
Made in cuts: No. 00, No. 0, No. 1 and No. 2.

4"

9/32" x 1/8"

6"

13/32" x 5/32"

8"

1/2" x 7/32"

## ROUND HANDLE NEEDLE FILES

Generally used by die makers, tool makers, watch makers and other users who require fine tools. These files are made with round knurled handles in 12 shapes as illustrated below, and are made in

sizes 4", 5½" and 6¼". Made in cuts No. 0, No. 2, No. 4 and No. 6. These files are also put up as an assortment consisting of one each of the 12 shapes, packed in one box.

### ROUND



### HALF ROUND



### FLAT



### \*CROSSING OR OVAL



### KNIFE



### SQUARE



### THREE SQUARE



### SLITTING



### EQUALLING



### BARRETTE



### JOINT

(Cut on 2 Round Edges Only)



### MARKING

(Cut on Hf. Rd. side only)



\*Crossing is furnished in 5½" and 6¼" lengths. Oval is furnished in 4" lengths.  
Prices upon application

## SQUARE HANDLE NEEDLE OR ESCAPEMENT FILES

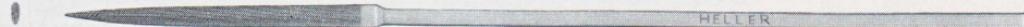
Used by die makers, tool makers and watch makers. Similar to round handle needle files, but generally lighter in cross section. Made in the 5½"

size only and in cuts No. 0, No. 2, No. 4 and No. 6. Also furnished in assortments consisting of one each of the 12 shapes, packed in one box.

### ROUND



### oval



### FLAT



### BARRETTE



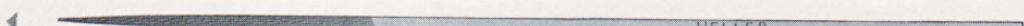
### KNIFE



### SQUARE



### THREE SQUARE



### EQUALLING



### SLITTING

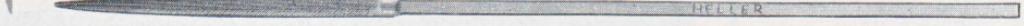


### JOINT

(Cut on Two Round  
Edges Only)



### HALF ROUND



### HALF ROUND BLUNT



Prices upon application

## DIE SINKERS FILES

Used by die sinkers or anyone requiring small files. Made in twelve shapes in the  $3\frac{1}{2}$ " size only, in cuts No. 0, No. 1 and No. 2. These files are also made

up as an assortment consisting of one each of the 12 shapes, packed in one box.

### ROUND

$\frac{1}{8}$ "



### HALF ROUND

$\frac{1}{4}$ " x  $\frac{3}{32}$ "



### FLAT

$\frac{15}{64}$ " x  $\frac{5}{64}$ "



### OVAL

$\frac{1}{32}$ " x  $\frac{7}{64}$ "



### KNIFE

$\frac{9}{32}$ " x  $\frac{5}{64}$ " x  $\frac{1}{64}$ "



### SQUARE

$\frac{1}{8}$ "



### THREE SQUARE

$\frac{13}{64}$ "



### FLAT 2 RD. EDGES

(Crochet)  
 $\frac{3}{16}$ " x  $\frac{5}{64}$ "



### FLAT 1 SAFE EDGE

$\frac{3}{16}$ " x  $\frac{5}{64}$ "



### OVAL 1 SHARP EDGE

$\frac{1}{32}$ " x  $\frac{7}{64}$ "



### LOZENGE

$\frac{13}{64}$ " x  $\frac{1}{8}$ "



### AURIFORM

$\frac{7}{32}$ " x  $\frac{7}{64}$ "



Prices upon application

## 5" PARALLEL MACHINE FILES

Designed for use in filing machines, and to cut on the push, or forward, stroke. Made in twelve shapes in the 5" size only, not including tang. Made in cuts

No. 00, No. 0 and No. 2. Also made up as an assortment consisting of one each of the 12 shapes, packed in one box.

### ROUND

$\frac{1}{4}$ "



### HALF ROUND

$\frac{17}{64}$ " x  $\frac{3}{8}$ "



### SQUARE

$\frac{1}{4}$ "



### PIPPIN

$\frac{7}{32}$ " x  $\frac{3}{32}$ "



### KNIFE

$\frac{3}{8}$ " x  $\frac{3}{32}$ "



### OVAL

$\frac{1}{4}$ " x  $\frac{5}{32}$ "



### THREE SQUARE

$\frac{11}{64}$ "



### CROCHET

$\frac{1}{4}$ " x  $\frac{1}{8}$ "



### EQUALLING

$\frac{1}{4}$ " x  $\frac{1}{8}$ "



### PILLAR

(2 Safe Edges)  
 $\frac{1}{4}$ " x  $\frac{1}{8}$ "



### LOZENGE

$\frac{9}{32}$ " x  $\frac{5}{32}$ "



### CANT

$\frac{13}{32}$ " x  $\frac{5}{32}$ "



Prices upon application

## 8" PARALLEL MACHINE FILES

For use in Oliver, Harvey-Butterfly, Cochrane-Bly and similar machines. These files are 8" over-all, and cut on the pull, or down stroke.

### ROUND



Made in No. 00, No. 0 and No. 2 Cuts

$\frac{1}{8}$ " Wide  
 $\frac{3}{16}$ " Wide  
 $\frac{1}{4}$ " Wide

$\frac{5}{16}$ " Wide  
 $\frac{3}{8}$ " Wide

$\frac{1}{2}$ " Wide  
 $\frac{5}{8}$ " Wide

### HALF ROUND



Made in No. 00, No. 0 and No. 2 Cuts

$\frac{3}{16}$ " Wide x  $\frac{3}{32}$ " Thick  
 $\frac{1}{4}$ " Wide x  $\frac{1}{8}$ " Thick

$\frac{3}{8}$ " Wide x  $\frac{3}{16}$ " Thick  
 $\frac{1}{2}$ " Wide x  $\frac{1}{4}$ " Thick

$\frac{5}{8}$ " Wide x  $\frac{5}{16}$ " Thick  
 $\frac{3}{4}$ " Wide x  $\frac{3}{8}$ " Thick

### PILLAR (ONE SAFE EDGE)



Made in No. 00, No. 0 and No. 2 Cuts

$\frac{3}{16}$ " Wide x  $\frac{3}{32}$ " Thick  
 $\frac{1}{4}$ " Wide x  $\frac{1}{8}$ " Thick

$\frac{3}{8}$ " Wide x  $\frac{3}{16}$ " Thick  
 $\frac{1}{2}$ " Wide x  $\frac{1}{4}$ " Thick

$\frac{5}{8}$ " Wide x  $\frac{5}{16}$ " Thick  
 $\frac{3}{4}$ " Wide x  $\frac{3}{8}$ " Thick

### THREE SQUARE



Made in No. 00, No. 0 and No. 2 Cuts

$\frac{3}{16}$ " Wide  
 $\frac{1}{4}$ " Wide

$\frac{3}{8}$ " Wide  
 $\frac{1}{2}$ " Wide

$\frac{5}{8}$ " Wide

Prices upon application

## **8" PARALLEL MACHINE FILES—Continued**

## CROCHET



Made in No. 00, No. 0 and No. 2 Cuts

$\frac{3}{16}$ " Wide x  $\frac{3}{32}$ " Thick  
 $\frac{1}{4}$ " Wide x  $\frac{1}{8}$ " Thick

**3/8" Wide x 3/16" Thick**

$\frac{5}{8}$ " Wide x  $\frac{7}{32}$ " Thick

## SQUARE



Made in No. 00, No. 0 and No. 2 Cuts

$\frac{3}{16}$ "  
 $\frac{1}{4}$ "

$\frac{3}{8}''$   
 $\frac{1}{2}''$

54/11

oval



Made in No. 00, No. 0 and No. 2 Cuts

**11/32" Wide x 3/16" Thick**

KNIFE



Made in No. 00, No. 0 and No. 2 Cuts

**15/32" Wide x 1/8" Thick**

Prices upon application

## 8" PARALLEL MACHINE FILES—Continued

### PIPPIN



Made in No. 00, No. 0 and No. 2 Cuts  
 $1\frac{1}{64}$ " Wide x  $\frac{5}{32}$ " Thick

### LOZENGE



Made in No. 00, No. 0 and No. 2 Cuts  
 $1\frac{1}{32}$ " Wide x  $\frac{5}{32}$ " Thick

### CANT



Made in No. 00, No. 0 and No. 2 Cuts  
 $1\frac{1}{32}$ " Wide x  $\frac{5}{32}$ " Thick

### EQUALLING



Made in No. 00, No. 0 and No. 2 Cuts  
 $\frac{3}{8}$ " Wide x  $\frac{5}{64}$ " Thick

### SMALL FILE ASSORTMENT

Assortment consists of 12 files: The Oval, Pippin, Knife, Lozenge, Cant and Equalling, which are made in the one width illustrated; and the Half Round, Round, Square, Three Square, Pillar, and Crochet in widths of  $\frac{3}{16}$ ".

### LARGE FILE ASSORTMENT

Assortment consists of 12 files: The Oval, Pippin, Knife, Lozenge, Cant, and Equalling, which are made in the one width illustrated; and the Half Round, Round, Square, Three Square, Pillar, and Crochet in widths of  $\frac{3}{8}$ ".

Prices upon application

## BENCH FILING MACHINE FILES

Made for use in machines for filing of patterns, dies, etc. These files cut on the pull, or down, stroke. Available in two sizes— $3\frac{1}{4}$ " long with  $\frac{1}{8}$ " shank, and  $3\frac{1}{4}$ " long with  $\frac{1}{4}$ " shank. Made in cuts

SIZE $3\frac{1}{4}'' \times \frac{1}{8}''$		SIZE $3\frac{1}{4}'' \times \frac{1}{4}''$	
$\frac{1}{64}''$	<b>ROUND</b>		<b>ROUND</b>
$1\frac{3}{64}'' \times \frac{3}{32}''$	<b>HALF ROUND</b>		<b>HALF ROUND</b>
$1\frac{3}{64}'' \times \frac{5}{64}''$	<b>PILLAR</b> (2 safe edges)		<b>PILLAR</b> (2 safe edges)
$\frac{5}{32}''$	<b>THREE SQUARE</b>		<b>THREE SQUARE</b>
$1\frac{3}{64}'' \times \frac{5}{64}''$	<b>CROCHET</b>		<b>CROCHET</b>
$\frac{7}{64}''$	<b>SQUARE</b>		<b>SQUARE</b>
$\frac{3}{16}'' \times \frac{7}{64}''$	<b>oval</b>		<b>oval</b>
$1\frac{5}{64}'' \times \frac{3}{32}''$	<b>KNIFE</b>		<b>KNIFE</b>
$\frac{7}{32}'' \times \frac{7}{64}''$	<b>PIPPIN</b>		<b>PIPPIN</b>
$1\frac{1}{32}'' \times \frac{7}{64}''$	<b>LOZENGE</b>		<b>LOZENGE</b>
$1\frac{7}{64}'' \times \frac{3}{32}''$	<b>CANT</b>		<b>CANT</b>
$1\frac{3}{64}'' \times \frac{5}{64}''$	<b>EQUALLING</b>		<b>EQUALLING</b>
		$\frac{1}{4}''$	$\frac{1}{4}'' \times 1\frac{1}{64}''$
		$\frac{7}{32}'' \times \frac{1}{8}''$	$\frac{7}{32}'' \times \frac{1}{8}''$
		$\frac{7}{32}''$	$\frac{7}{32}''$
		$\frac{1}{4}'' \times \frac{1}{8}''$	$\frac{3}{16}''$
		$\frac{5}{16}'' \times \frac{5}{32}''$	$\frac{5}{16}'' \times \frac{5}{32}''$
		$\frac{1}{4}'' \times \frac{1}{8}''$	$\frac{19}{64}'' \times \frac{5}{32}''$
		$\frac{15}{64}'' \times \frac{1}{8}''$	$\frac{15}{64}'' \times \frac{1}{8}''$
		$\frac{15}{64}'' \times \frac{7}{64}''$	$\frac{7}{32}'' \times \frac{1}{8}''$

No. 00, No. 0 and No. 2. These files also put up as an assortment consisting of one each of the 12 shapes, packed in one box.

## DIE SINKERS RIFFLERS

Used by die makers for getting into corners, crevices, holes, and contours of intricate dies and molds. Made in 6½" size only and in cuts No. 0, No. 2 and

No. 4 Made in shapes No. 1 to No. 18, and can be furnished as an assortment consisting of one each of the 18 shapes, packed in one box.



Continued on next page

Prices upon application

## DIE SINKERS RIFFLERS—Continued



## SILVERSMITH RIFFLERS

Used in the same fashion as die sinker rifflers, but having much heavier cross sections. Made in 12 shapes as illustrated below, and in cuts No. 0 and

No. 2. They are made in the 7½" size only. These files can be furnished as an assortment consisting of one each of the 12 shapes, packed in one box.



Prices upon application

## JOINT FILES (ROUND EDGE and SQUARE EDGE)

Round Edge and Square Edge Joint Files are flat in shape and parallel in width and thickness. Double cut on both edges, safe (uncut) on the two flat sides.



Both Round Edge and Square Edge Joint Files are made in sizes:

4"

6"

$1\frac{3}{32}$ " x  $\frac{5}{64}$ "

$1\frac{9}{32}$ " x  $\frac{7}{64}$ "

$1\frac{3}{32}$ " x  $\frac{3}{64}$ "

$1\frac{9}{32}$ " x  $\frac{5}{64}$ "

Approximate size of finished files—thin:

Approximate size of finished files—thin:

Both Round Edge and Square Edge Joint Files are made in cuts: No. 0 and No. 2

Joint Files, Round Edge, may also be obtained in minimum quantities of one dozen without extra charge in the following B & S gauges:

4"—9 to 26 gauge

6"—10, 12, 14 and 16 gauge

Joint Files, Square Edge, may also be obtained in minimum quantities of one dozen without extra charge in the following B & S gauges:

4"—16, 18 and 20 gauge

6"—10, 12, 14 and 16 gauge

### B & S GAUGES AND THEIR DECIMAL EQUIVALENTS

B&S Gauge No. 9—.114"

B&S Gauge No. 10—.102"

B&S Gauge No. 11—.091"

B&S Gauge No. 12—.081"

B&S Gauge No. 13—.072"

B&S Gauge No. 14—.064"

B&S Gauge No. 15—.057"

B&S Gauge No. 16—.051"

B&S Gauge No. 17—.045"

B&S Gauge No. 18—.040"

B&S Gauge No. 19—.036"

B&S Gauge No. 20—.032"

B&S Gauge No. 21—.028"

B&S Gauge No. 22—.025"

B&S Gauge No. 23—.022"

B&S Gauge No. 24—.020"

B&S Gauge No. 25—.018"

B&S Gauge No. 26—.016"

Prices upon application

## CORRUGATING FILES



**6" Hand Corrugating** files, also called Straight Rowing files, are designated to corrugate when stroked

straight ahead. The approximate cross section dimensions are  $2\frac{3}{32}$ " x  $5\frac{5}{32}$ ".

Cuts . . . . .	No. 0	No. 2	No. 4
Corrugations per inch . . .	50	84	120

**6" Pillar Corrugating**—Left and Right Hand Serrating—are designed to corrugate when stroked to the left in the case of the left hand file, and when

stroked to the right in the case of the right hand file. The approximate cross section dimensions are  $1\frac{5}{32}$ " x  $\frac{9}{64}$ ".

Cuts . . . . .	No. 0	No. 1	No. 2	No. 3	No. 4
Corrugations per inch	56	76	96	116	136

## SCREW HEAD FILES

Screw Head Files are used for clearing out the slots in the heads of screws, or for any work where a small, sharp edged file is required. They are

made in the 3" size only and in one very fine cut only.

Screw Head Plain



### MADE IN SIZE:

Approximate size of finished file:

Screw Head Tanged



**3"**  
 $\frac{7}{16}$ " x  $\frac{1}{32}$ "

Prices upon application

# HELLER VIXEN MILLED CURVED TOOTH FILES

In 1917, The Heller Brothers Company introduced what was then and is still today, the greatest improvement ever made in an automobile body file — the VIXEN MILLED CURVED TOOTH FILE. The teeth actually have a decided undercut which makes the file

cut fast, last long, clear itself readily, and leave a smooth finish. Used by automobile manufacturers, garages, body bumping shops, pattern shops, machine shops, foundries, airplane manufacturers, railroad shops, sheet metal shops, stone workers, and shipyards.

## WEIGHTS PER DOZEN

SIZE	Flexible	Flat	Half Round	Square	Pillar	Utility	Babbitt
Inches	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
8	1½	3	3¾	2	3½	3	2¾
10	2¼	5¾	7	3¼	6	5¾	5
12	4¾	9¼	12	8¾	11½	10¼	9
14	7¾	15¾	18	18½	17½	16½	14¾

All 8" and 10" VIXENS are packed one dozen per box.

All 12" and 14" VIXENS are packed  $\frac{1}{2}$  dozen per box.

## TEETH PER INCH

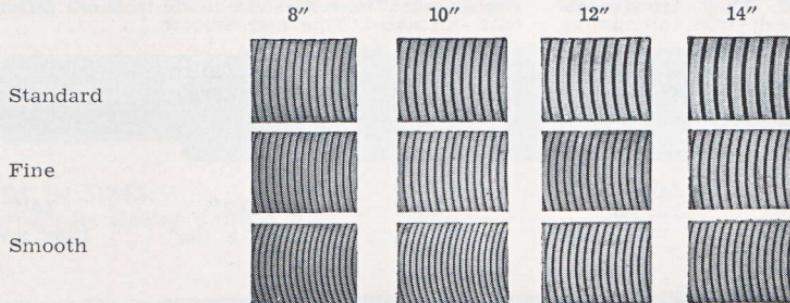
FLAT FLEXIBLE, HALF ROUND SOLID, HALF ROUND SHELLS, MOLDING				PILLAR AND SQUARE				FLAT UTILITY			BABBITT	
Size	Stand. Fine Smooth			Size	Stand. Fine Smooth			Size	Coarse Smooth		8 inch	10 inch
	Stand.	Fine	Smooth		8 inch	18	20		Side	Side		
8 inch	14	16	18	10 inch	16	18	20	8 inch	14	18	10 inch	10
10 inch	12	14	18	12 inch	14	16	18	10 inch	12	18	12 inch	8
12 inch	10	14	16	14 inch	14	16	18	12 inch	10	16	14 inch	7
14 inch	8*	12	15					14 inch	8	15		

\*The 14" Flexible Standard is available in 7 tooth or 9 tooth per inch style. The 8 tooth per inch is furnished unless otherwise specified.

Prices upon application

## HELLER VIXEN MILLED CURVED TOOTH FILES

Illustrations below show the comparative coarseness of Standard, Fine, and Smooth cuts.



## HELLER VIXEN FLEXIBLE FILES

Vixen Files have made enviable records in the automobile body building industry, and are also adapted to all types of sheet metal work. Vixens have teeth on both sides, and the flexible type should be at-

tached to a file holder. This holder is easily adjusted for curving the file outward (convex) or inward (concave). Vixen flexible files are made in three different cuts—Standard, Fine and Smooth.



### MADE IN SIZES:

Approximate size of finished files:

	8"	10"	12"	14"
	$25\frac{1}{32}'' \times 5\frac{5}{32}''$	$1'' \times 5\frac{5}{32}''$	$1\frac{5}{32}'' \times 5\frac{3}{16}''$	$1\frac{11}{32}'' \times 5\frac{3}{16}''$

Prices upon application

## HELLER VIXEN FLAT FILES, WITH TANG

Vixen Flat Files are used for all classes of work where fast filing is required. They are recommended for use on sheet steel, iron, aluminum,

babbitt, brass, copper, marble, slate, fibre, hard rubber, etc. These files are made in three different cuts—Standard, Fine and Smooth.



### MADE IN SIZES:

Approximate size of finished files:

**8"**

$1\frac{3}{16}'' \times 1\frac{1}{64}''$

**10"**

$1'' \times \frac{7}{32}''$

**12"**

$1\frac{5}{32}'' \times 1\frac{7}{64}''$

**14"**

$1\frac{11}{32}'' \times \frac{5}{16}''$

## HELLER VIXEN FLAT BABBITT FILES, WITH TANG

Made in the flat shape only. They are coarser than the Standard Cut.



### MADE IN SIZES:

Approximate size of finished files:

**8"**

$1\frac{3}{16}'' \times 1\frac{1}{64}''$

**10"**

$1'' \times \frac{7}{32}''$

**12"**

$1\frac{5}{32}'' \times 1\frac{7}{64}''$

**14"**

$1\frac{11}{32}'' \times \frac{5}{16}''$

Prices upon application

## HELLER VIXEN FLAT UTILITY FILES, WITH TANG

Made in the flat shape only. Standard cut on one side and Smooth cut on the other. A valuable ad-

dition to every mechanic's kit and every household tool chest.



### MADE IN SIZES:

Approximate size of finished files:

8"

$1\frac{3}{16}'' \times 1\frac{1}{64}''$

10"

$1'' \times 7\frac{1}{32}''$

12"

$1\frac{5}{32}'' \times 1\frac{7}{64}''$

14"

$1\frac{11}{32}'' \times 5\frac{5}{16}''$

## HELLER VIXEN FLAT WHIZCUT FILES, WITH TANG

This new file has milled curved teeth, positioned on an arc, that work with a genuine shearing cut. The long serpentine-like chip-breaking grooves pre-

vent clogging, result in a smooth finish without chattering or skidding. Made in Standard, Fine and Smooth cuts.



### MADE IN SIZES:

Approximate size of finished files:

8"

$1\frac{3}{16}'' \times 1\frac{1}{64}''$

10"

$1'' \times 7\frac{1}{32}''$

12"

$1\frac{5}{32}'' \times 1\frac{7}{64}''$

14"

$1\frac{11}{32}'' \times 5\frac{5}{16}''$

Prices upon application

## HELLER VIXEN PILLAR FILES

Made with the standard VIXEN curved undercut teeth on both sides. Widely used today in pattern shops where a narrow file for finishing wood or

metal patterns is necessary. Made in Standard, Fine and Smooth Cuts.



### MADE IN SIZES:

Approximate size of finished files:

**8"**  
 $1\frac{17}{32}'' \times \frac{1}{4}''$

**10"**  
 $2\frac{1}{32}'' \times 1\frac{9}{64}''$

**12"**  
 $2\frac{5}{32}'' \times 2\frac{3}{64}''$

**14"**  
 $2\frac{9}{32}'' \times 1\frac{13}{32}''$

## HELLER VIXEN SQUARE FILES

Used in keyways or wherever a narrow file is necessary. Made in Standard, Fine and Smooth Cuts.



### MADE IN SIZES:

Approximate size of finished files:

**8"**  
 $1\frac{7}{64}''$

**10"**  
 $1\frac{11}{32}''$

**12"**  
 $1\frac{15}{32}''$

**14"**  
 $1\frac{19}{32}''$

Prices upon application

## HELLER VIXEN HALF ROUND SHELL FILES

Teeth on the convex side only. Made in Standard, Fine, and Smooth Cuts.



### MADE IN SIZES:

Approximate size of finished files:

8"

$\frac{7}{8}'' \times \frac{1}{8}''$

10"

$1\frac{1}{8}'' \times \frac{1}{8}''$

12"

$1\frac{1}{4}'' \times \frac{1}{8}''$

14"

$1\frac{15}{32}'' \times \frac{1}{8}''$

## HELLER VIXEN HALF ROUND MOLDING FILES

Teeth on the concave side only. Used primarily for filing the moldings on automobile bodies. Indispensable in repair shops. Made in Standard, Fine, and Smooth cuts. 8"-10"-12"-14" lengths.



### MADE IN SIZES:

Approximate size of finished files:

8"

$\frac{7}{8}'' \times \frac{1}{8}''$

10"

$1\frac{1}{8}'' \times \frac{1}{8}''$

12"

$1\frac{1}{4}'' \times \frac{1}{8}''$

14"

$1\frac{15}{32}'' \times \frac{1}{8}''$

## HELLER VIXEN HALF OVAL SHELL FILES

For use where a fast, smooth-cutting, long-lasting file is in demand. Great labor-savers when used for filing bearings in railroad shops, sugar mills,

mines, etc. Teeth on convex side only. Standard Cut only.



### MADE IN SIZE:

Approximate size of finished file

14"

1 $\frac{1}{32}$ " x 2 $\frac{7}{64}$ "

## HELLER VIXEN HALF ROUND FILES

For use where a fast, smooth-cutting, long-lasting file is in demand. Great labor savers when used

for filing bearings in railroad shops, sugar mills, mines, etc. Standard, Fine and Smooth Cuts.



### MADE IN SIZES:

Approximate size of finished files: 2 $\frac{3}{32}$ " x 1/4"

8"

2 $\frac{3}{32}$ " x 1/4"

10"

1 $\frac{5}{16}$ " x 5 $\frac{5}{16}$ "

12"

1 $\frac{1}{8}$ " x 3 $\frac{3}{8}$ "

14"

1 $\frac{1}{32}$ " x 2 $\frac{7}{64}$ "

## HELLER VIXEN NARROW FLEXIBLE FILE

This file is similar to the regular flexible file, but because of its narrow width can be used in "tight" places where the standard width is not suitable. Made in Standard cut only.



### MADE IN SIZES:

Width of finished file:

14"  
5/8"

14"  
3/4"

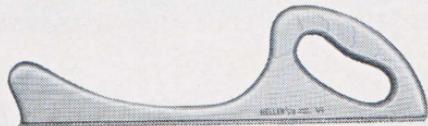
14"  
1"

## HELLER VIXEN FILE HOLDERS

Other files and holders not illustrated here are shown in complete Vixen Catalog No. 101.



V-2 Fits 14" Half Round Shell or Half Oval Shell.



V-1 Special Wood Holder to fit 14" Flexible file.



V-3 Fits 14" Molding.

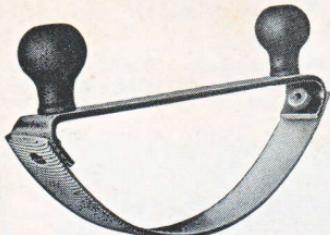


416 FLAT HOLDER for 12" or 14" Flexible Vixen.

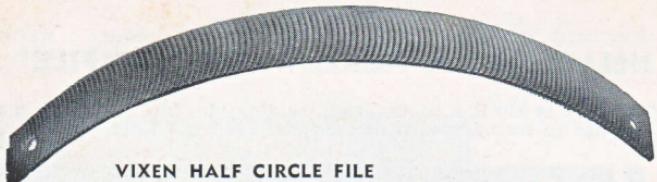


472 ADJUSTABLE HOLDER (aluminum) for 12" and 14" Flexible Vixen. Curves file concave or convex. Can also be used in the straight position.

Prices upon application

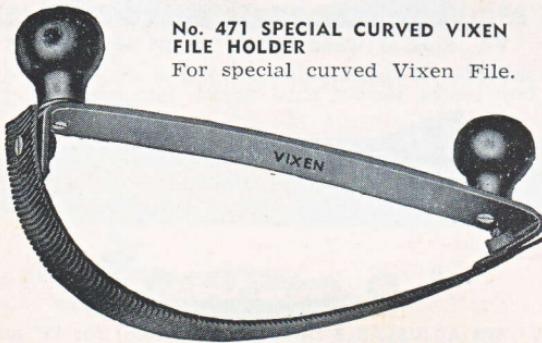


**NO. 470 VIXEN HALF CIRCLE FILE HOLDER**  
For half circle Vixen File.



**VIXEN HALF CIRCLE FILE**

For use on fenders and contours where the forward stroke is more convenient. Teeth on one side only. Made in 8" and 14" lengths. Standard Cut only.



**No. 471 SPECIAL CURVED VIXEN  
FILE HOLDER**  
For special curved Vixen File.



**SPECIAL CURVED VIXEN FILE**

For use on fenders and fender wells where the regular flexible file will not take care of short curves. The Special Curved Vixen File is rigid. Teeth on one side only. Made in 14" length. Standard Cut only.

